

Managing Taxpayer Risk

The Federal Government Responsibly Prices and Manages Risk When Issuing Loans and Loan Guarantees

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Introduction

The U.S. government is arguably the largest and most influential financial institution in the world, with about \$2.7 trillion outstanding in loans and loan guarantees. Among other things, these federal credit programs help college students afford tuition, first-time homebuyers access affordable mortgages, and budding small businesses get the capital they need to expand.

In these and many other cases, the private sector will simply not lend to certain borrowers or will lend only under unaffordable or unmanageable conditions. That's why we rely on federal credit programs: The U.S. government can bear certain risks that the private sector cannot to achieve certain public goals such as increasing the global competitiveness of our workforce, returning stability to the U.S. housing market, and adding jobs through business expansion.

These programs typically run at very low cost to taxpayers. On average, every \$1 allocated to loan and guarantee programs generates more than \$99 of economic activity from individuals, businesses, nonprofits, and state and local governments, according to our analysis.³

But in the wake of certain widely publicized credit blunders, most notably this past summer's bankruptcy announcement from solar company Solyndra LLC, some have called into question Washington's ability to manage financial risk. Conservative critics contend that the government is incapable of accurately pricing risk, and that political pressure encourages government agencies to routinely underestimate the risk to taxpayers when extending credit.4

Government underpricing of risk is a convenient theory for free-market ideologues but it runs contrary to the overwhelming evidence.

Our review of federal government credit programs back to 1992 shows that on average the government is quite accurate in its risk pricing. In fact, the majority of government credit programs cost less than originally estimated, not more.⁵ Specifically, we found that:

- Based on initial estimates over the past 20 years, the government expected its credit programs to cost taxpayers 79 cents for every \$100 loaned or guaranteed. Based on recently updated data, those cost predictions were reasonably accurate but slightly underestimated. The current budgetary impact of these programs is about 94 cents per \$100 loaned or guaranteed.
- There's little evidence that credit programs are biased toward underpricing risk. In fact, a little more than half of all nonemergency federal credit programs will cost the government less than what they are expected to over the life of the program.
- The remainder is accounted for by the losses suffered by the Federal Housing Administration on loans made in 2008 during the peak of the housing crisis. Excluding that book of loans, all nonemergency federal credit programs cost slightly less than expected.

Conservative critics often portray a world in which government bureaucrats haphazardly issue loans and loan guarantees without considering taxpayer exposure to risk. That's simply not the case. This issue brief explains how the government prices credit risk in the federal budget, how well those cost estimates have reflected reality over the years, and why the government is in a particularly good position to assume certain types of risk.

Budgeting for credit risk

Federal government agencies adhere to strict budget and accounting standards to carefully assess the risks and potential losses associated with credit programs. Here's how it works.

Before an agency can issue any loans or loan guarantees, Congress must first authorize and allocate funding for the program.⁶ In most cases Congress starts by determining how much money the program will be authorized to guarantee or loan and then appropriates a certain percentage of that amount to cover the program's expected cost to the government. That cost estimate—assessed by both the agency administering the program and the president's Office of Management and Budget—takes into account expected repayments, defaults, recoveries, and any interest or fees collected over the life of the loan, adjusted to current dollars.

The net cost to the federal government as a percentage of total dollars loaned or guaranteed is known as the subsidy rate. As an example, say Congress approves a \$100 million loan guarantee program within the Department of Agriculture. The department models expected market conditions and loan activity and then estimates a subsidy rate, which the Office of Management and Budget independently estimates as a check on the agency's methodology. Let's say the estimated subsidy rate is 0.75 percent. That means the government expects to take a net loss of 75 cents for every \$100 it guarantees over the life of those loans. To cover expected losses on the \$100 million in loan guarantees, the government sets aside \$750,000 in a special account at the Treasury Department. This is similar to a loan loss reserve at a private bank.

Each subsequent year, the Office of Management and Budget and the agencies recalculate the subsidy rate to reflect actual loan performance, current economic conditions, and anything else administrators may have learned about a program. These revised numbers are reported in the president's budget each year, which gives us a pretty good idea of each program's "actual" costs and the government's ability to assess financial risk.

If conservative claims were accurate in saying that the federal government cannot accurately price for risk, then one would expect the initial cost estimates to be significantly lower than the more recent re-estimates. Using the Department of Agriculture example above, if the critics were right, the re-estimated subsidy rate would presumably be much higher than 0.75 percent, and actual outlays would be higher than estimated. Let's see how the government's risk estimates actually stack up.

Government risk estimates are quite accurate

To test this theory, we analyzed credit data published in the president's 2013 budget. We compared initial and updated cost estimates, also known as subsidy re-estimates, for each book of nonemergency loans and loan guarantees for each federal credit program since 1992, the first year for which comprehensive data are available.

We limit our analysis to nonemergency credit programs, omitting programs created in response to the recent financial crisis. This includes programs created through the Troubled Asset Relief Program—the so-called Wall Street rescue package passed by Congress at the height of the housing and financial crises—and the U.S. Department of the Treasury's purchase of securities issued by the two troubled housing finance giants Fannie Mae and Freddie Mac. Both of these programs are temporary, atypically large, and are accounted for in the federal budget using different standards than all other credit programs.8

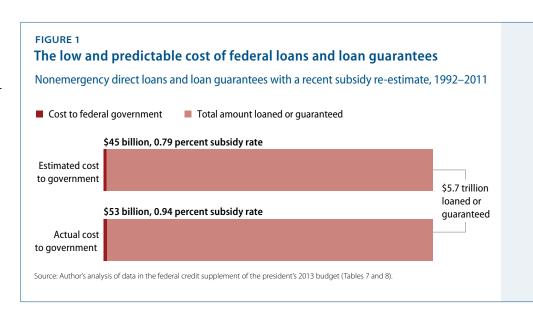
If we had included these "emergency" programs, it would drastically skew the overall results—but skew them in favor of our basic argument. Based on our analysis of data published in the 2013 budget, these programs will cost the government about \$130 billion less than initially expected. So their inclusion would make it seem as though the government significantly overestimated the cost of all credit programs over the past 20 years, which is not the case.

We also exclude any federal credit program that is not listed in the federal credit supplement of president's budget, 10 and any program that did not publish a subsidy re-estimate in the 2013 budget.¹¹ We do this both because complete data are unavailable for these programs and because their costs are not recorded in the federal budget. Notably, this includes insurance programs through the Federal Deposit Insurance Corporation, mortgage guarantees offered by the two housing finance giants Fannie Mae and Freddie Mac (both now under government conservatorship), and guarantees on mortgage-backed securities offered by the government corporation Ginnie Mae.¹²

Here's what we found out about nonemergency federal credit programs. Federal agencies have issued \$5.7 trillion worth of these loans or loan guarantees since 1992.¹³ Based on our analysis of initial estimates, the government expected these programs to cost taxpayers about 79 cents for every \$100 loaned or guaranteed, or a 0.79 percent subsidy rate overall.

Of course, no one expects those estimates to be perfect. Many of these loans such as home mortgages or funding for large infrastructure projects take decades to pay back. Government financial analysts are charged with the difficult task of modeling payments, defaults, recoveries, and market conditions for the entire life of the loan, so some error has to be expected.

But as it turns out, the initial estimates weren't very far off. The current budgetary impact of these credit programs is about 94 cents per \$100 loaned or guaranteed, or a 0.94 percent subsidy rate, according to our analysis of updated subsidy estimates.14 To put that in a budgetary context, while issuing nearly \$6 trillion in loans and guarantees over the past 20 years, the government initially predicted about \$45 billion in total costs to taxpayers, but the actual costs were slightly higher—about \$53 billion.

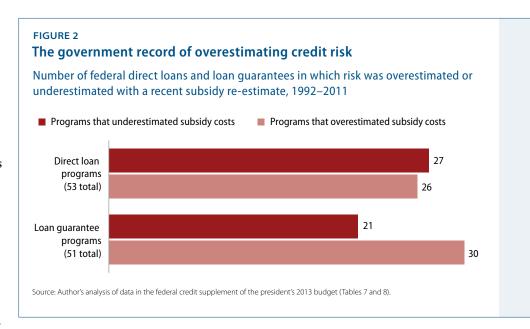


That difference—\$8 billion over two decades or \$400 million per year—might seem high at first. But it amounts to just 0.15 percent of the total dollars loaned or guaranteed by the government and 0.02 percent of all government spending over that period. 15 (see Figure 1)

Of course, the federal government's performance on individual programs varied substantially. Some programs overestimate risks, while others underestimate. But as mentioned above, some conservatives argue that political pressures cause the government to systemically underprice costs to taxpayers when issuing loans or guarantees.

The data show this to be untrue. Of the 104 nonemergency credit programs administered since 1992, our analysis shows that most have actually overestimated total subsidy costs. 16 Fifty-six programs overpriced risk over their lifetimes, while 48 programs underpriced risk. (see Figure 2)

Our analysis only takes into account lifetime costs for each program, not the federal government's ability to estimate costs on an individual year's portfolio of loans. Indeed, critics often point to individual



data points such as the Solyndra bankruptcy as evidence of the government's inability to price financial risk. But what matters most is actually the net budgetary impact over time of these inaccuracies, which is what is measured in Figure 1.

Overall these overestimates and underestimates—whether across programs or in individual books of business—tend to roughly balance out in the long run, give or take a reasonable margin of error. As we show in the following section, however, all of these underestimated losses can actually be attributed to a single year of mortgage guarantees made at the height of the housing crisis.

The recent housing crisis skews the results

By far the largest nonemergency credit program is the Federal Housing Administration's single-family mortgage insurance program, which has guaranteed about \$2.4 trillion in mortgage debt since 1992.¹⁷ That's more than 40 percent of the total nonemergency government lending and credit enhancement over that period.

The Federal Housing Administration's flagship insurance program deals exclusively in residential mortgages. That's good news for taxpayers when the U.S. housing market is booming but bad news when it's struggling. So in the thick of what is arguably the worst foreclosure crisis in our country's history—a time when home prices have dropped more than 30 percent nationwide from their peak five years ago, leading to millions of people losing their homes—the agency is facing unprecedented losses far beyond what its actuarial models predicted, severely depleting its capital reserves. 18

Those losses are especially bad for mortgage loans originated in 2008, the year the housing crash sparked a widespread financial crisis. 19 The agency initially expected its single-

family insurance program to save taxpayers about \$400 million on loans originated that year, mostly from fees collected from lenders. After adjusting for recent losses and current market conditions, these 2008 guarantees are now expected to cost taxpayers \$10.9 billion—by far the worst performance of any single book of business in the agency's 78-year history.²⁰ (see Figure 3)

As bad as those numbers are, it's important to put them into perspective. The recent collapse in home prices and subsequent wave of foreclosures was not something any actuarial analysis would have predicted, though it's clear that the Federal Housing Administration did not ade-

FIGURE 3 The housing crisis brought unprecedented losses on mortgage guarantees The initial cost versus re-estimated cost of home loan guarantees from the Federal Housing Administration during the housing crisis, 2007–2011 \$12,000,000 \$10,000,000 Re-estimated cost (from 2013 budget) \$8,000,000 \$6,000,000 \$4,000,000 \$2,000,000 Intial cost estimate (from first year of each book -\$2,000,000 -\$4,000,000 -\$6,000,000 -\$8,000,000 -\$10,000,000 2007 2008 2009 2010 2011 Source: Author's analysis of data in the federal credit supplement of the president's 2013 budget (Table 8)

quately adjust to the crisis in its early days. Despite enormous losses, the Federal Housing Administration actually weathered the housing crisis better than many of its counterparts in the private sector.

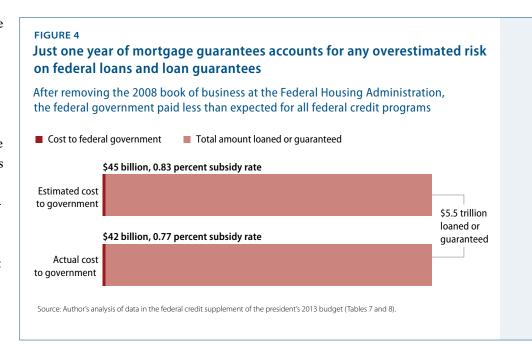
Indeed, many private mortgage insurers either went out of business since the crisis began or significantly scaled back their insurance business.²¹ Meanwhile, as private capital left the mortgage market in recent years, ²² the Federal Housing Administration meaningfully increased its insurance activity to keep the market afloat, backing 40 percent of home-purchase mortgages in 2011.²³ It's also worth noting that the Federal Housing Administration has taken steps since the onset of the crisis to improve its risk management.²⁴ Starting in 2009, the agency:

- Repeatedly increased fees and tightened underwriting standards to improve the quality of its new books of business
- Created a new risk office and hired a consultant to recommend best practices for its operation
- Cracked down on faulty lender practices
- Adopted a more robust model for projecting home price appreciation

As a result, the Federal Housing Administration's 2010 and 2011 books of business

are expected to save the agency \$13.7 billion over the life of those loans, which is significantly more than initial subsidy estimates.²⁵ (see Figure 3)

Due to the sheer size of the single-family insurance program, the Federal Housing Administration's losses from loans made in 2008 weigh heavily on our overall findings. In fact, when you take away that single book of mortgage guarantees, nonemergency credit programs actually overestimated total costs to government by \$3 billion over the past 20 years.²⁶ (see Figure 4)



Seeing the big picture

Largely lost in this discussion of federal government cash flows and subsidy rates is an understanding of why the government extends credit in the first place. In 2011 tens of thousands of American small businesses expanded operations thanks to loans and credit enhancement from the federal government.²⁷ Millions of undergraduate students paid their college tuition with money borrowed at affordable rates from the government.²⁸ And hundreds of thousands of homebuyers took out a manageable 30-year fixed-rate mortgage,²⁹ which likely wouldn't exist without government support.³⁰

The federal government is in a unique position to issue these loans and guarantees for several reasons. First, the government can borrow money at a much lower rate than any private firm, meaning they can usually charge lower rates when lending for public purposes. Second, the government can spread risk unlike any private financial institution, both across long time periods and a diverse credit portfolio that spans housing, education, agriculture, infrastructure, international development, and several other industries. This diversification limits taxpayer exposure to drastic swings from year to year or booms and busts in any individual market.³¹ Third, the government has the unmatched ability to limit risks by regulating markets and ensuring compliance from lenders and borrowers.

For these and other reasons, responsible risk management has long been essential to sound policymaking. Harvard economist David A. Moss wrote in 2002 that risk management is one of the fundamental ways in which policymakers solve problems." He added that "the historical record reveals a remarkable degree of economic sophistication in the way leading policymakers thought about risk and about the government's role in managing it."32

To be sure, the government's risk management is far from perfect, and some federal credit programs are subject to poor modeling, excessive risk-taking, and avoidable losses to taxpayers. But we mustn't mistake these anomalies for the norm. Instead we should continuously seek smart reforms to the way the government issues loans and loan guarantees, learning from what has worked in the past and what hasn't. Analysts and policymakers are right to scrutinize the efficacy and efficiency of individual credit programs, but that debate should focus on simple facts, not on heated and unsubstantiated rhetoric.

When you look at all loans issued or guaranteed by the government over the past 20 years, one fact is clear: Uncle Sam has proven to be a safe and responsible lender.

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Endnotes

- Douglas J Elliott, Uncle Sam in Pinstripes: Evaluating U.S. Federal Credit Programs (Washington: Brookings Institution Press, 2011), available at http://www.brookings.edu/press/ Books/2011/unclesaminpinstripes.aspx.
- Congressional Budget Office, "Fair-Value Accounting for Federal Credit Programs" (2012), available at http://www. cbo.gov/sites/default/files/cbofiles/attachments/03-05-Fair-Value_Brief.pdf.
- Author's analysis of federal credit data reported in the president's 2013 budget. Based on recent re-estimates, federal credit programs cost the government about 94 cents per \$100 loaned or guaranteed.
- For one recent example of this claim, see: Edward Pinto, "Truth In Government Lending Is Long Overdue," Real Clear Markets, March 12 2012, available at http://www. realclearmarkets.com/articles/2012/03/21/truth_in_government_lending_is_long_overdue_99575.html.
- Author's analysis of data from the Office of Management and Budget, The President's Budget for Fiscal Year 2013: Federal Credit Supplement Spreadsheets (The White House, 2012), tables 7 and 8, available at http://www.whitehouse. gov/omb/budget/Supplemental.
- This is not necessarily true for all credit programs. Some programs such as the Federal Housing Administration's single-family mortgage insurance program are expected to run at no cost to government, so they do not receive congressional appropriations. In many cases, these programs are limited by an explicit cap set by Congress.
- Though this is the basic model established by the Federal Credit Reform Act of 1990, the actual cost-estimate and appropriation processes vary a bit from program to program. For more detail on the Federal Credit Reform Act and the federal credit budgeting process, see: Thomas Stanton, "Primer on Credit Reform" (Washington: Center on Federal Financial Institutions), available at http://www.coffi.org/pubs/ Primer%20on%20Credit%20Reform%20by%20Stanton.pdf.
- Troubled Asset Relief Program loan and guarantee programs are statutorily obligated to report subsidy costs using so-called fair value accounting, adding a private market premium to all loans and guarantees. This is different from the standards laid out in the Federal Credit Reform Act. Treating the Troubled Asset Relief Program's reported costs the same as costs from other credit programs would be like comparing two products priced in different currencies without considering the exchange rate.
- Since 2008 the government loaned or guaranteed about \$913 billion through the Troubled Asset Relief Program and Treasury Department purchases of securities issued by Fannie Mae and Freddie Mac. The government initially expected to lose about \$151 billion, according to our analysis of data published in the 2013 budget. Based on recent re-estimates, those losses are now expected to be much lower—about \$19 billion. Given the sheer size of these emergency programs, including them in the analysis would have meaningfully skewed the results, making it look like the government drastically overpriced risk over the past 20 years.
- 10 This includes all loans and guarantees issued by the Federal Deposit Insurance Corporation, the Federal Reserve System, the government-sponsored enterprises Fannie Mae and Freddie Mac, and all other off-budget government entities.
- 11 This includes the Federal Housing Administration's General and Special Risk Insurance Programs and guarantees on mortgage-backed securities through the Government National Mortgage Association.

- 12 Fannie Mae, Freddie Mac, and the Federal Deposit Insurance Corporation are considered off-budget entities, so they are not required to estimate an annual subsidy rate for the president's budget. Ginnie Mae is technically on budget, but the agency's guarantee covers securities made up of certain government-backed mortgages (namely loans guaranteed by FHA, USDA, and VA loans). Ginnie Mae is not required to update their subsidy estimate each year because the guarantee is already accounted for in the individual agency estimates (again, through the FHA, USDA, or VA). So having a separate subsidy rate for Ginnie Mae would double-count certain costs in the budget.
- 13 This is an incomplete total. All totals in this brief exclude federal credit programs created by the Troubled Asset Relief Program and purchases by the Treasury Department of securities issued by Fannie Mae and Freddie Mac. The report also excludes any federal credit program that did not publish a recent subsidy re-estimate in the president's 2013 budget, including the Federal Housing Administration's General and Special Risk Insurance Programs and guarantees on mortgage-backed securities through the Government National Mortgage Association. When we include the TARP and MBS purchases in the analysis, the government has issued \$1.4 trillion in direct loans and \$5.2 trillion in loan guarantees since 1992. It also excludes all implicit guarantees to government-sponsored enterprises, including the mortgage giants Fannie Mae and Freddie Mac, since these guarantees are not priced or scored annually for the budget in the same way as other federal credit programs.
- 14 Author's analysis of federal credit data reported in the president's 2013 budget.
- 15 The federal government's outlays for 1992–2011 add to about \$43.81 trillion, according to data published in the president's 2013 budget. For more information, see: Office of Management and Budget, Historical Tables (The White House, 2012), available at http://www.whitehouse.gov/ omb/budget/Historicals.
- 16 It is quite difficult to count exactly how many credit programs there are. An individual credit "program" could have several subprograms or "risk categories"—some may be loan guarantees, others may be direct loans. For purpose of this analysis, we define a program the same way as the 2013 Budget's Federal Credit Supplement, summing across all risk categories and across all books of business.
- 17 Author's analysis of federal credit data reported in the president's 2013 budget. These numbers (and all others in this section of the report) include both the FHA single-family and HECM reverse-mortgage insurance programs through the Mutual Mortgage Insurance Program.
- Recent financial reports indicate that FHA's single-family capital reserves are well below the required level, and many analysts speculate that FHA will soon require taxpayer support for the first time in its 77-year history. For more information, see: Sarah Wartell and John Griffith, "Too Early to Sound the FHA Alarm" (Washington: Center for American Progress, 2011), available at http://www.americanprogress. org/issues/2011/12/pdf/fha_market_stability.pdf.
- For the most part these loans were made before FHA put in place appropriate controls to stem risks in this new business. Those loan books also contain a high concentration of so-called seller-financed down payment assistance loans, in which sellers covered the required down payment at the time of purchase in exchange for inflated purchase prices. Loans with seller-financed down-payment assistance experienced considerably higher claim rates than comparable nonassisted loans, according to FHA's actuaries. These often-fraudulent assistance programs were later banned from FHA insurance programs by the Housing and Economic Recovery Act of 2008. For more information, see: Federal Housing Administration, Actuarial Review of the Mutual Mortgage Insurance Fund (Department of Housing and Urban Development, 2010), available at http://portal. hud.gov/hudportal/HUD?src=/program_offices/housing/ rmra/oe/rpts/actr/actrmenu.

- 20 Author's analysis of federal credit data in the president's 2013 budget.
- 21 PMI Group, one of the country's largest private mortgage insurers, filed for Chapter 11 bankruptcy in November 2011 after posting 16 straight quarterly losses. Another major insurer, Triad Guaranty Inc., stopped selling policies in July 2008. See: Dawn McCarty and Steven Church, "PMI Group Seeks Bankruptcy After Regulators Take Over Main Unit," Bloomberg Businessweek, November 28, 2011, available at http://www.businessweek.com/news/2011-11-28/pmigroup-seeks-bankruptcy-after-regulators-take-over-main-
- 22 According to the Federal Housing Finance Agency, private mortgage insurers underwrote \$193.4 billion in insurance in 2008, the first year after the housing bust. That was the industry's lowest volume since 2000. See: Federal Housing Finance Agency, State of the Private Mortgage Insurance Industry (2009), available at http://www.fhfa.gov/webfiles/14779/MMNOTE_09-04%5B1%5D.pdf.
- 23 According to a recent financial report, FHA in 2010 served more than 1.75 million households by insuring \$319 billion in single-family mortgages. That volume was second only to that of 2009. For more, see: Federal Housing Administration, "FHA Issues Annual Financial Status Report to Congress," Press release, November 16, 2010, available at http://portal. hud.gov/hudportal/HUD?src=/press/press_releases_media_advisories/2010/HUDNo.10-252.
- 24 Government Accountability Office, "Federal Housing Administration: Improvements Needed in Risk Assessment and Human Capital Management," GAO-12-15, Report to the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, November 2011, available at http://www.gao.gov/ new.items/d1215.pdf.
- 25 According to data reported in the 2013 budget, FHA's 2010 and 2011 books were expected to save the agency a total of \$9.8 billion. Based on recent re-estimates, those books are now expected to save \$13.9 billion.
- 26 Author's analysis of federal credit data in the president's 2013 budget. Based on our analysis, after omitting FHA's single-family book of business for 2008, the government expected all nonemergency credit programs to cost \$45 billion to taxpayers. Based on recent re-estimates, that cost is actually \$42 billion.

- 27 According to the Small Business Administration, the 7(a) loan program alone assisted 37,000 small businesses. See: U.S. Small Business Administration, FY 2012 Congressional Budget Justification and FY 2010 Annual Performance Report (2012), available at http://www.sba.gov/sites/default/files/ FINAL%20FY%202012%20CBJ%20FY%202010%20APR_0.
- 28 For the 2010–11 academic year, 8.7 million undergraduate students took out Stafford loans. Of that group, about 7.8 million took out subsidized Stafford loans. See: College Board Advocacy and Policy Center, "Trends in Student Aid 2011" (2011), available at http://trends.collegeboard. org/student_aid/report_findings/indicator/accessible/ Federal_Loans_Percentage_Borrwing_Number_of_Borrowers and Amounts.
- 29 According to a recent financial report, the Federal Housing Administration served more than 1.1 million homebuyers in 2010, 882,000 of which were first-time homebuyers. Many of these borrowers took out long-term, fixed rate loans. For more, see: Federal Housing Administration, "FHA Issues Annual Financial Status Report to Congress."
- 30 For a full explanation of why the 30-year fixed-rate mortgage would largely disappear without government support, see: Richard K. Green, Testimony before the U.S. Senate Banking Committee, "Housing Finance Reform: Should there be a Government Guarantee?", September 13, 2011. available at http://banking.senate.gov/public/index. cfm?FuseAction=Files.View&FileStore_id=56068079-9c03-40d4-b36a-72913d3850b4.
- For a thorough and thoughtful discussion of why the federal government lends, see: Douglas J Elliott, "Theoretical and Political Underpinnings of Federal Credit Programs." In Uncle Sam in Pinstripes: Evaluating U.S. Federal Credit Programs. (Washington: Brookings Institution Press, 2011), available at http://www.brookings.edu/press/Books/2011/unclesaminpinstripes.aspx.
- 32 David A. Moss, When All Else Fails: Government as the Ultimate Risk Manager (Cambridge, MA: Harvard University